

IN THE CLAIMS:

1. (Currently amended) A carrier (10) for at least one specimen chamber (11), ~~in particular~~ for cryoconservation of biological specimens, comprising
 - a mounting frame (20) ~~which is adapted~~ for positioning the specimen chamber (11), wherein the mounting frame (20) has a first frame part (30) and a second frame part (40) which can be joined together detachably using connecting elements (50) and which come in contact on side faces (31, 41) of the frame parts in the assembled state, wherein
 - ~~characterized in that~~
 - the specimen chamber (11) can be secured between the side faces (31, 41) of the mounting frame, so that the specimen chamber is immovable relative to the mounting frame.
2. (Currently amended) The carrier according to ~~C~~claim 1, wherein one of the side faces (31) is flat and the other side face (42) has a profiling so that receptacle elements (21-26) are formed between the side faces, (31, 41) and the specimen chamber can be secured in these receptacle elements when the mounting frame (20) is assembled.
3. (Currently amended) The carrier according to ~~C~~claim 1, wherein both side faces (31, 41) have profiling so that receptacle elements (21-26) are formed between the side faces (31, 41) and the specimen chamber can be secured in the receptacle elements when the mounting frame (20) is in the assembled state.
4. (Currently amended) The carrier according to ~~one of the preceding~~ claims 1, wherein the receptacle elements (21-26) have an oval, triangular, rectangular or slotted cross section.
5. (Currently amended) The carrier according to ~~one of the preceding~~ claims 1, wherein the connecting elements (50) comprise fitting webs, and grooves, and/or pins, and bushings, or combination thereof, on the side faces.
6. (Currently amended) The carrier according to ~~C~~claim 5, wherein the webs, grooves, pins, and/or bushings, or combination thereof, have latching profiles.

7. (Currently amended) The carrier according to ~~one of the preceding~~ claims 1, wherein one of the frame parts (30) has tension pins (34) on its outside, each tension pin being aligned with respect to the receptacle elements so that stretching of the specimen chamber (44) on the frame part (30) is made possible.
8. (Currently amended) The carrier according to ~~one of the preceding~~ claims 1, wherein the frame parts (30, 40) are pivotably joined together on one side.
9. (Currently amended) The carrier according to ~~one of the preceding~~ claims 1, wherein each of the frame parts ~~each~~ have outer frame elements which form a rectangular shape ~~of~~ from the mounting frame (20).
10. (Currently amended) The carrier according to ~~Claim~~ claim 9, wherein the frame parts are equipped with inner frame elements which also form receptacle elements in the assembled state so that the specimen chamber (44) can be secured in the receptacle elements.
11. (Currently amended) The carrier according to ~~one of the preceding~~ claims ~~1 through 8~~, wherein each of the frame parts ~~each~~ consist of frame elements (35) which extend outward radially in a star shape.
12. (Currently amended) The carrier according to ~~one of the preceding~~ claims 1, which is connected to a data memory device (60) having at least one data memory (61).
13. (Currently amended) A cryostorage device, comprising a carrier (10) according to ~~one of the preceding~~ claims 1 and at least one specimen chamber (44) of a flexible, elastically deformable material.
14. (Currently amended) The cryostorage device according to ~~Claim~~ claim 13, wherein the at least one specimen chamber (44) is in the form of a hollow cylinder, a hollow cone, a pipe, a tube, a channel or a hollow needle.
15. (Currently amended) A method for storage of at least one suspension specimen in a low-temperature state, comprising the steps of:
 - accommodating the at least one suspension specimen in at least one specimen chamber (44) made of a flexible elastically deformable material,

- mounting the specimen chamber (11) in a carrier (10) according to ~~one of the preceding~~ claim 1 through 13, wherein the specimen chamber (11) is secured between the frame parts (30, 40), and
 - converting the suspension specimen to a low-temperature state by positioning the carrier (10) with the specimen chamber (11) in a cryomedium.
16. (Currently amended) The method according to claim 15, wherein the receptacle of the at least one suspension specimen into which at least one specimen chamber is inserted by immersing the at least one specimen chamber (11) with one inlet end into a specimen reservoir (70) and transferring the suspension specimen under the influence of a vacuum applied to the corresponding outlet end or under the influence of capillary forces.
17. (Currently amended) The method according to one of claims 15 or 16, wherein at least one partial specimen is detached from the at least one specimen chamber (11) in the low-temperature state by mechanical separation.
18. (Currently amended) The method according to claim 17, wherein the mechanical separation comprises cutting off chamber sections (12) of the specimen chamber (11) adjacent to the frame elements of the carrier (10).